ASSIGNMENT 1

Textbook Assignment: "Construction Support," chapter 1, pages 1-1 through 1-25.

1-1. Safety in the conduct of rigging operations depends primarily on what factor?

1. Size of line used
2. Type of slings used
3. Paygrade of the supervisor
4. Care and common sense of personnel assigned

1-2. What is the most important operational check (inspection) made on hoisting and rigging equipment?

1. Crane operation
2. Line and rigging
3. Lifting and load
4. Load only

1-3. The strength of rigging lines depends on what factor(s)?

1. The manufacturer of the line
2. The size, fiber used, and the type of stranding
3. Tensile strength tests
4. Lay and resistance to wear

1-4. The term "whipping" refers to what factor when applied to a line?

1. It prevents twisting of the line
2. It prevents fatigue resistance of the line
3. It improves the abrasion resistance of the line
4. It prevents strands from unraveling

1-5. What precaution should you take before storing a fiber line?

1. Ensure the line is dry
2. Use forced rotation to squeeze excess water from the .line
3. Dip the line in an oil lubricant to prevent water damage
4. Check the core strength by performing a sudden strain test

1-6. Of the following areas, which one should be used for storing a line?

1. A dry, unheated building that is well ventilated
2. An air conditioned building
3. A heated and unventilated building
4. A building with many windows that allows sunlight to enter

LOAD FACTORS

A. Safe Working Load
B. Breaking Strength
C. Free Payload Strength
D. Safety Factor

Figure 1A

IN ANSWERING QUESTIONS 1-7 THROUGH 1-9, REFER TO FIGURE 1A. SELECT THE LOAD FACTOR THAT MATCHES THE SITUATION PRESENTED IN THE QUESTION.

1-7. The tension at which the line will part when a load is applied.

1. A
2. B
3. C
4. D

1-8. The load that can be applied without causing damage.

1. A
2. B
3. C
4. D

1-9. The ratio between the breaking strength and the safe working load.

1. A
2. B
3. C
4. D

1-10. What is the SWL of a new 2-inch-diameter No. 1 manila line?

1. 3,380 lb
2. 4,620 lb
3. 6,625 lb
4. 7,750 lb

1-11. Synthetic-fiber lines are used in the Navy for which of the following reasons?

1. They are easy to handle
2. They are highly resistant to mildew, rot, and fungus
3. They are light-weight and strong
4. Each of the above

1-12. Using the "rule-of-thumb" formula for computing the SWL of synthetic fiber line, determine the SWL of 1-inch-diameter nylon line.

1. 3,840 lb
2. 4,000 lb
3. 4,180 lb
4. 4,280 lb

1-13. Wire rope consists of what three parts?

1. Breech, choker hitch, and becket
2. Choker hitch, fiber line, and spreader bar
3. Wire, strands, and core
4. Strands, breech, and spreader bar

1-14. Unlaying of nonpreformed wire rope is rapid and could cause serious injury.

1. True
2. False

1-15. Wire rope with what number of (a) strands and (b) wires in each strand is the most flexible?

1. (a) 6 (b) 19
2. (a) 6 (b) 37
3. (a) 8 (b) 38
4. (a) 8 (b) 41

TENSILE STRENGTH

A. 180,000 to 200,000
B. 200,000 to 220,000
C. 220,000 to 240,000
D. 240,000 to 260,000

Figure 1B

IN ANSWERING QUESTIONS 1-16 THROUGH 1-18, MATCH THE TENSILE STRENGTH IN FIGURE 1B WITH THE TYPE OF ROPE MATERIAL USED AS THE QUESTION.

1-16. Improved-plow steel.

1. A
2. B
3. C
4. D

1-17. Mid-plow steel.

1. A
2. B
3. C
4. D

1-18. Plow-steel.

1. A
2. B
3. C
4. D

1-19. To ensure an accurate measurement of the diameter of a wire rope, you should measure the wire rope in (a) how many places on six-stranded rope and (b) how many places on eight-stranded rope?

1. (a) Two (b) three
2. (a) Three (b) three
3. (a) Three (b) four
4. (a) Two (b) four

1-20. Using the "rule-of-thumb" formula, what is the SWL of 3/4-inch-diameter wire rope?

1. 3.2 tons
2. 4.5 tons
3. 5.3 tons
4. 6.4 tons

1-21. The inspection of wire rope clips at regular intervals should also include what other task?

1. Hitting the clips with a hammer to see if the metal will flake
2. Spraying the clips with paint to show they have been inspected
3. Measuring for slippage of clips
4. Removing the clips and examining the wire rope

1-22. What is the purpose of a wire rope thimble in an eye splice?

1. It reduces abrasive wear on the wire rope
2. It increases the distance between the load and the hoist tip
3. It speeds up the work
4. It is required for hoisting cylindrical objects

1-23. Shackles should replace hooks during what lifting operation?

1. When lifting a load to an unknown radius
2. When lifting a load where personnel may be working or walking under the load
3. When the loads are too heavy for the hooks to handle
4. When lifting the load in a tight area

1-24. What should be done with a hook that has been bent by overloading?

1. Straighten it and put it back in service
2. Have the safety LCPO approve it for service
3. Weld additional steel on the sides and place it back in service
4. Cut it in half and discard it

1-25. At what time interval or under what circumstances should you inspect hooks visually?

1. Monthly
2. After 50 hr of service
3. At the beginning of each workday and before lifting a full-rated load
4. Only when the hook is used for clamshell or dragline projects

1-26. What advantage does fiber-line slings have over wire-rope or chain slings?

1. They are heavier and stronger
2. They resist damage from sharp edges
3. They are more flexible and offer protection to finished materials
4. They require less supporting equipment

1-27. An endless sling is frequently used as a choker hitch.

1. True
2. False

1-28. A single-leg sling is also known as a

1. chocker
2. strap
3. bridle
4. gripp

1-29. Two single slings can be combined to form a longer single sling.

1. True
2. False

1-30. Why is it. important to match sets of slings?

1. So they will withstand heavier loads
2. So a varied mobile lift within a small working area can be accomplished
3. So the load strain will be equal and the load will come up evenly
4. Each of the above

1-31. Which of the following components is added to heavy equipment to aid in lifting?

1. Stress bars
2. Spreader bars
3. Roll bars
4. Lifting eyes

1-32. Chafing gear is used to protect slings that are exposed to sharp edges.

1. True
2. False

1-33. Chain slings are desirable for what type of load?

1. Cold loads
2. Light loads
3. Nonsharp loads
4. Hot- and sharp-edged loads

1-34. When using chain slings, you should ensure what material is in place around the load to provide a gripping surface for the chain?

1. Fiber pads
2. A composite covering
3. Wood
4. Wire mesh

1-35. Bolts and heavy gauge wire may be used to fasten links of chain together.

1. True
2. False

1-36. Which of the following defects should you look for during a fiber-line sling inspection?

1. Deterioration caused by exposure to the weather
2. Broken fibers
3. Cut fibers
4. Each of the above

1-37. Wire-rope slings must be replaced when what percentage of wires are nicked or cut?

1. 1 percent
2. 2 percent
3. 3 percent
4. 4 percent

1-38. What type of collateral equipment is used to prevent crushing of a load?

1. Stress slings
2. Cargo pallets
3. Spreader bars
4. Rope slings

1-39. What is the advantage of using cargo pallets?

1. They make the load easier to move
2. They allow single large items to be moved more efficiently
3. Spreader bars do not need to be used
4. Single items may be moved piece by piece

1-40. Which of the following is NOT a requirement for performance as a competent signalman for a crane or hoist operation?

1. Be fully qualified with the operation
2. Ensure the suspended load never passes over anyone
3. Assist in operating the equipment, as needed
4. Wear high-visibility gloves

1-41. To ensure a load is stable and does not shift, you should rig the load so that its center of gravity is positioned in accordance with what requirement?

1. Above the hook
2. In line with the hook
3. Either 1 or 2 above
4. Below the hook

1-42. When the signalman desires to give the equipment operator instructions other than those established beforehand, the operator should perform what action first?

1. Stop all motion of the load
2. Have a runner contact the signalman
3. Blow the horn
4. Raise and lower the load about 2 feet in acknowledgement

1-43. When the distance or atmospheric conditions prevent clear visibility for signaling, what other form of communication should you use?

1. Large Q cards
2. Manual Morse
3. A flashing light
4. Two-way radio

1-44. What is the most important rigging precaution?

1. To determine the proper lifting angle
2. To determine whether hand signals being used are adequate
3. To determine the weight of all loads before attempting a lift
4. To ensure the crane can reach the material safely

1-45. Because gusty wind can affect loading and load-landing operations, you should take which of the following precautions?

1. Wrap the load with a wind-reducing material
2. Avoid handling loads that have large wind-catching surfaces
3. Add additional tie lines
4. Use additional tie-down ropes

1-46. What is the primary cause of death for riggers on the job?

1. Electrocution
2. Falling equipment
3. Cables that snap

1-47. What is the minimum safe working distance from an energized conductor of 125,000 volts?

1. 10 ft
2. 15 ft
3. 20 ft
4. 25 ft

1-48. Refer to figure 1-18 in the text. What is wrong with the lifting procedure?

1. There is only one tag line
2. The hoisting lines are plumb
3. The hoisting lines are not plumb

1-49. Under certain circumstances, it is permissible to ride on a well-rigged load.

1. True
2. False

1-50. OPNAVINST 4110.2 establishes guidance and policy for what subject?

1. Safety precautions and programs
2. Health and physical readiness programs
3. Hazardous material control and management
4. Basic skills for job orientation and OJT programs

1-51. The requirement to comply with a foreign country's HMJHW regulations (if more restrictive) is found in what document(s)?

1. Host nation Status of Forces agreement
2. United States Navy HM/HW regulations
3. United Nations HM/HW regulations
4. U.S. OSHA and EPA regulations

1-52. Of the following OPNAV instructions, which ones cover the use, storage, and disposal of HM?

1. OPNAVINST 1306.1 and 5352.1
2. OPNAVINST 4110.2 and 5100.23
3. OPNAVINST 5354.1 and 1160.4
4. OPNAVINST 5700.7 and 6110.1

1-53. The MSDS identifies the type of personnel protective clothing and equipment needed in the case of exposure.

1. True
2. False

1-54. The battalion air detachment must be capable of deploying within how many hours of notification?

1. 12
2. 24
3. 48
4. 72

1-55. A battalion air detachment should have approximately how many members?

1. 75
2. 90
3. 120
4. 160

1-56. With logistic support intact, an air detachment may operate independently of an NMCB for what total length of time?

1. 1 month
2. 6 months
3. 12 months
4. Indefinitely

1-57. What person assigns members to the air detachment in a battalion?

1. Det OIC
2. OPS officer
3. Company commander
4. Executive officer

1-58. The Table of Allowance equips the battalion for contingency conditions for a total of how many days?

1. 90
2. 120
3. 180
4. 270

1-59. What is the (a) length and (b) width of a 463L pallet cargo space, in inches?

1. (a) 104 (b) 84
2. (a) 108 (b) 84
3. (a) 104 (b) 88
4. (a) 108 (b) 88

1-60. The MOCC is under the direction of what battalion officer?

1. OPS officer
2. Air det OIC
3. Commanding officer
4. Executive officer

1-61. What is the maximum load capacity of a palletized cargo pallet?

1. 2,900 lb
2. 5,000 lb
3. 10,000 lb
4. 15,000 lb

1-62. The construction project platoon is NOT responsible for which of the following tasks?

1. Disaster recovery
2. Rapid runway repairs
3. Construction of advanced bases
4. Assigning heavy equipment for use

1-63. Tool kits should be maintained at what maximum percentage of kit assembly allowance?

1. 100 percent
2. 90 percent
3. 80 percent
4. 75 percent

1-64. On the jobsite, what person is responsible for tool stowage and security?

1. The project safety petty officer
2. The crew members
3. The crew leader
4. The company chief